



DRAFT REPORT

# Stormwater Management Plan

## MA MS4 General Permit Requirements

*Prepared for:*  
*Avon, Massachusetts*

*EPA NPDES Permit Number: MAR 041089*

*June 2019*



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# Certification

**Authorized Representative (Optional):** All reports, including SWPPPs, inspection reports, annual reports, monitoring reports, reports on training and other information required by this permit must be signed by a person described in Appendix B, Subsection 11.A or by a duly authorized representative of that person in accordance with Appendix B, Subsection 11.B. If there is an authorized representative to sign MS4 reports, there must be a signed and dated written authorization.

The authorization letter is:

- ☐ Attached to this document (document name listed below)

- ☐ Publicly available at the website below

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

Printed Name

Signature \_\_\_\_\_

Date

# Small MS4 Authorization

The NOI was submitted on

The NOI can be found at the following (document name or web address):

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Authorization to Discharge was granted on

The Authorization Letter can be found (document name or web address):

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## **1.0 BACKGROUND**

### ***1.1 Stormwater Regulation***

The Stormwater Phase II Final Rule was promulgated in 1999 and was the next step after the 1987 Phase I Rule in EPA's effort to preserve, protect, and improve the Nation's water resources from polluted stormwater runoff. The Phase II program expands the Phase I program by requiring additional operators of MS4s in urbanized areas and operators of small construction sites, through the use of NPDES permits, to implement programs and practices to control polluted stormwater runoff. Phase II is intended to further reduce adverse impacts to water quality and aquatic habitat by instituting the use of controls on the unregulated sources of stormwater discharges that have the greatest likelihood of causing continued environmental degradation. Under the Phase II rule all MS4s with stormwater discharges from Census designated Urbanized Area are required to seek NPDES permit coverage for those stormwater discharges.

### ***1.2 Permit Program Background***

On May 1, 2003, EPA Region 1 issued its Final General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (2003 small MS4 permit) consistent with the Phase II rule. The 2003 small MS4 permit covered "traditional" (i.e., cities and towns) and "non-traditional" (i.e., Federal and state agencies) MS4 Operators located in the states of Massachusetts and New Hampshire. This permit expired on May 1, 2008 but remained in effect until operators were authorized under the 2016 MS4 general permit, which became effective on July 1, 2018.

### ***1.3 Stormwater Management Plan (SWMP)***

The SWMP describes and details the activities and measures that will be implemented to meet the terms and conditions of the permit. The SWMP accurately describes the permittees plans and activities. The document should be updated and/or modified during the permit term as the permittee's activities are modified, changed or updated to meet permit conditions during the permit term. The main elements of the stormwater management program are (1) a public education program in order to affect



public behavior causing stormwater pollution, (2) an opportunity for the public to participate and provide comments on the stormwater program (3) a program to effectively find and eliminate illicit discharges within the MS4 (4) a program to effectively control construction site stormwater discharges to the MS4 (5) a program to ensure that stormwater from development projects entering the MS4 is adequately controlled by the construction of stormwater controls, and (6) a good housekeeping program to ensure that stormwater pollution sources on municipal properties and from municipal operations are minimized. The hyperlinks provided in Appendix A offer additional information and supporting documents related to the MS4 Permit and the aforementioned minimum control measures.

#### ***1.4 Town Specific MS4 Background***

The Town must give special consideration to and meet eligibility requirements for their discharges to be able to apply for coverage under the General Permit. Eligibility will be determined based on three categories: Endangered Species Act, National Historic Preservation Act, and Water Quality Impaired Waters. The Town must establish that discharges from its storm drain system do not adversely impact endangered species, critical habitats, and historic properties in order to be covered by the General Permit. Furthermore, the Town must identify all receiving waters that have been classified as Water Quality Impaired Waters by the MA DEP. The Town of Avon and its surrounding water bodies are shown on *Figure 1: System Locus*. The Notice of Intent (NOI) for coverage under the Small MS4 General Permit was submitted to EPA and MassDEP on September 28, 2018. A copy of the NOI is provided in Appendix B.

## 2.0 SWMP COMPONENTS

### 2.1 *Parties Involved in Implementation*

Stormwater programs in the Town of Avon are currently a responsibility of the Director of Public Works, William A. Fitzgerald, Jr. The members of the Avon stormwater committee are listed in the table below. This committee has prioritized detailed goals and concerns regarding the implementation of a stormwater program.

Name	Title	Department
		Department of Public Works
		Board of Selectmen
		Board of Health
		Conservation Commission

### 2.2 *Documentation Regarding Endangered Species*

In order to comply with part 1.9.1 of the NPDES Permit, the Town has attached documentation in Appendix D supporting Avon's eligibility determination of Criterion C with regard to federal Endangered and Threatened Species and Critical Habitat Protection. Criterion C states that, "determination is made by EPA, or by the applicant and affirmed by EPA, that the stormwater discharges and discharge related activities will have "no affect" on any federally threatened or endangered listed species or designated critical habitat under the jurisdiction of the USFWS." In this case, USFWS provided a letter in place of a concurrence letter for informal consultation.

The attachments in Appendix D include the aforementioned letter, as well as the results of the IPaC environmental review process. Using the IPaC environmental review process, one endangered species has been identified within Avon's boundaries: the

Northern Long-Eared Bat. This species does not have critical habitats designated within the Town, and the MS4 Permit will not adversely affect the listed species within the MS4 area.

### ***2.3 Documentation Regarding Historic Properties***

The Town has attached documentation in Appendix E supporting their eligibility determination regarding Historic Properties, in compliance with part 1.9.2 of the Permit. This document, Appendix D of the Massachusetts General MS4 Permit, includes information supporting Avon's determination as Criterion A, stating that the discharges do not have the potential to cause effects on historic properties.

Historic site considerations will be evaluated further as part of the design/permitting of new/retrofit BMPs proposed for implementation as part of MS4 compliance. Regarding the National Historic Preservation Act, under 36 CFR 800, this facility is an existing facility authorized by the previous Permit, and is not undertaking any activity involving subsurface land disturbance less than 1 acre. This MS4 Permit will have "no potential to cause effects," in accordance with 36 CFR 800.3(a)(1).

### ***2.4 Documentation Regarding Discharges***

Attached in Appendix F is the documentation for tracking any new or increased discharges granted by MassDEP in compliance with part 2.1.2 of the Permit. At this time, the Town of Avon has no new and/or increased discharges. The Town will document any new and/or increased discharges on the form provided in Appendix F and include project specific information regarding best management practices implemented for those discharges. A sample discharges form is provided in Appendix F.

### ***2.5 Sanitary Sewer Overflow (SSO) Inventory***

In the event of an overflow or bypass, a notification must be reported within 24 hours by phone to MassDEP, EPA, and other relevant parties. The verbal notification should be followed up with a written report following MassDEP's Sanitary Sewer Overflow (SSO)/Bypass notification form within 5 calendar days of the time you become aware of the overflow, bypass, or backup.

As of June 2019, there are no known SSOs that discharge to the MS4. An inventory of all known locations where SSOs have discharged to the MS4 will be maintained by the Town if any are found. This inventory shall include SSOs resulting from inadequate conveyance capacities, or where interconnectivity of the storm and sanitary sewer infrastructure allows for connection of flow between the systems. A sample inventory form is provided in Appendix G and includes the following information:

1. Location (approximate street crossing/address and receiving water, if any);
2. A clear statement of whether the discharge entered a surface water directly or entered the MS4;
3. Date(s) and time(s) of each known SSO occurrence (i.e., beginning and end of any known discharge);
4. Estimated volume(s) of the occurrence;
5. Description of the occurrence indicating known or suspected cause(s);
6. Mitigation and corrective measures completed with dates implemented; and
7. Mitigation and corrective measures planned with implementation schedules.

## ***2.6 IDDE Program and Bylaws***

The Town's IDDE plan will be developed during the first year of the new permit. The IDDE program is detailed in section 3.3 of Minimum Control Measures. The Town's is currently working to adopt a Stormwater Management, Erosion Control, and Illicit Discharge Bylaw.

## ***2.7 Sediment and Erosion Control Procedures***

Written procedures for the Town's site inspections and enforcement of sediment and erosion control procedures in accordance with part 2.3.5 of the Permit, Construction Site Stormwater Runoff Control, are detailed in the Sections 3.4 and 3.5, Minimum Control Measures. This information includes the party responsible for site inspections and implementation of procedures.

## ***2.8 Public Drinking Water Supply Sources Protection***

The town has developed practices in effort to avoid or minimize impacts to surface public drinking water supply sources. These efforts are detailed in Minimum Control Measures

section 3.6, Good Housekeeping and Pollution Prevention. The Town plans to prioritize the enforcement of the existing stormwater pollution prevention plans.

## **2.9 *Activities to Monitor Discharges***

The Town will identify any discharges within public drinking water supply source areas and give priority to outfall inspections and screening required of the Minimum Control Measures in section 3.0.

## **2.10 *Annual Program Evaluation***

To comply with part 4.1 of the Permit, the Town annually self-evaluates compliance with the terms and conditions of the Permit and submits each self-evaluation as part of the Fiscal Year annual report. The 2018 NPDES Phase II Small MS4 General Permit Annual Report is attached as Appendix I.

### **3.0 MINIMUM CONTROL MEASURES**

In effort to reduce pollutants and comply with part 2.3 of the Permit, the Town focuses on the following minimum control measures. These sections describe the Town's practices to comply with each control measure, the responsible person(s) or party of each practice, and the goal(s) for each BMP of each control measure. The BMPs for each of the six minimum control measures are outlined in the forms provided in Appendix J.

#### **3.1 *Public Education and Outreach***

The Town shall implement an education program that includes educational goals based on stormwater issues of significance within the MS4 area. The ultimate objective of a public education program, permit part 2.3.2, is to increase knowledge and change behavior of the public so that the pollutants in stormwater are reduced.

The Town implemented a public education program as required by the 2003 permit and will continue that program and make the necessary adjustments to meet the additional requirements of the 2016 permit.

The program must include the education of the following four audiences: 1. residents, 2. businesses, institutions (churches, hospitals), and commercial facilities, 3. developers (construction), and 4. industrial facilities.

##### **3.1.1 *Background***

Responsible parties for public education and outreach efforts include the Department of Public Works, Board of Selectmen, and the Board of Health. The Town of Avon has implemented several actions in efforts to reach public education and outreach goals. The Selectmen continue to mail Stormwater Impacts in town-wide mailings and provide information on pet waste pickup to dog owners when licenses are renewed. The Department of Public Works continues to broadcast EPA/DEP stormwater programs on the Avon local cable channel. The Board of Health continues to hold Community Cleanup Day as budget and schedule allows.

##### **3.1.2 *Best Management Practices***

- I. Distribution of a minimum of two (2) educational messages over the permit term to the required audiences within the permit term (5 years), as listed below.

A. Residents

1. Publish outreach materials; distribute new resident packets to residents within Wetland Protection Areas.
2. Establish stormwater web site with pollution reporting capability.

B. Businesses, Institutions, and Commercial Facilities

1. Include stormwater information in permit materials.
2. Establish section on stormwater web site directed towards businesses, institution, and commercial facilities.

C. Developers (Construction)

1. Include stormwater information in permit materials; review and update application forms to meet the new requirements.
2. Establish section on stormwater website directed towards developers.

D. Industrial Facilities

1. Distribute stormwater information to industrial groups based on zoning and property use.
2. Establish section on web site directed towards industrial facilities.

### **3.2 Public Involvement and Participation**

The objective of the public involvement and participation control measure, permit part 2.3.3., is for the Town to provide the public with opportunities to engage in activities that promote good stormwater practices. The public must also be given the chance to review the Stormwater Management Plan (SWMP) and its implementation.

#### **3.2.1 Background**

Responsible parties for public involvement and participation efforts include the Department of Public Works, Board of Selectmen, and Board of Health. All information (Conservation Commission/ATM meeting minutes, etc) pertaining to stormwater and stormwater management is available on the Town's website. The Department of Public Works continues to speak at Town Meetings as appropriate to support ongoing stormwater and water quality projects and improvements.

#### **3.2.2 Best Management Practices**

- I. Public Review
  - A. Allow annual review of stormwater management plan and posting of stormwater management plan on website.
- II. Public Participation
  - A. Allow public to comment on stormwater management plan annually.
  - B. Provide opportunities for public involvement and participation in Avon's stormwater program (including clean up events).



### 3.3 Illicit Discharge Detection and Elimination (IDDE) Program

The Town shall put an IDDE program into place, permit part 2.3.4, in order to find and eliminate non-stormwater discharge sources. Procedures shall be implemented to fix any prevalent issues in the Town's storm sewer system. As identified in the Notice of Intent (NOI), attached in Appendix B, the following 94 outfall structures listed in the table below discharge to the Town of Avon's MS4 area. These outfall structures are displayed on *Figure 2: MS4 Urbanized Areas*.

Waterbody segment that receives flow from the MS4	Number of outfalls into receiving water segment	Chloride	Chlorophyll-a	Dissolved Oxygen/DO Saturation	Nitrogen	Oil & Grease/ PAH	Phosphorus	Solids/ TSS/ Turbidity	E. coli	Enterococcus	Other pollutant(s) causing impairments
Trout Brook (MA62-07)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fecal coliform
Brockton Reservoir (MA62023)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(Non-Native Aquatic Plants*
Waldo Lake (MA62201)	6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(Non-Native Aquatic Plants*
Tributary to Trout Brook	14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mary Lee Brook	6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Beaver Brook	8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Threeswamp Brook	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Searless Brook	7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed wetlands	49	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

#### 3.3.1 Background

The responsible party for IDDE efforts is the Department of Public Works. The Town continues to update the GIS map as new information becomes available, and incorporate additional attribute data related to condition of assets. The Town fields phone calls using Town lines for illicit discharge reports from the community. The Town Administrator, Board of Health, and Conservation Commission are available to take reports of suspected illicit discharges, sewage breakouts from septic systems, etc.

### 3.3.2 *Best Management Practices*

#### I. Legal Authority

A. The IDDE program shall include adequate legal authority to prohibit illicit discharges; investigate suspected illicit discharges; eliminate illicit discharges, including discharges from properties not owned by or controlled by the MS4 that discharge into the MS4 system; and implement appropriate enforcement procedures and actions. Adequate legal authority consists of a currently effective ordinance, by-law, or other regulatory mechanism. This ordinance, by-law, or other regulatory mechanism was a requirement of the MS4-2003 permit and was required to be effective by May 1, 2008.

#### II. SSO Inventory

A. Develop SSO Inventory Database within one year of effective permit date that logs historical SSOs that have occurred in the last 5 years, as discussed in further detail in section 2.5.

1. Coordinate with Department of Public Works for tracking of any future septic or SSOs.

#### III. Storm Sewer System Map

A. Update map within 2 years of effective date of permit and complete full system map 10 years after effective date of permit.

1. Make an electronic and physical copy of the map available to the public via the stormwater website and Avon Town Hall.
2. Map/verify 10% of system per year during permit years 1-10.
  - a) Phase I will be focused on during Years 1 and 2, while Phase II will be focused on during Years 3 thru 10.
3. Integrate system map updates with planned sewer expansion projects.

#### IV. Written IDDE Program Development

A. Develop and complete written IDDE program within 1 year of effective permit date. The IDDE program and permit attachments will be available at Avon Town Hall.

#### V. Implement IDDE Program

- A. Implement catchment investigations according to program and permit conditions within 18 months of the effective date of the Permit.
  - 1. Continue to enforce bylaw.
  - 2. Draft and implement stormwater management regulations.
  - 3. Coordinate water quality monitoring with dry weather screening
    - a) New monitoring system should include surveying for illicit discharge detection.

#### VI. Employee Training

- A. Coordinate annual stormwater training and incorporate with training required in Section 6.2.IV.B.

#### VII. Dry Weather Screening

- A. Conduct screening in accordance with outfall screening procedure and permit conditions.
  - 1. Screen 25% of outfalls per year during permit years 2-5.

#### VIII. Conduct Wet Weather Screening

- A. Conduct screening in accordance with outfall screening procedure and permit conditions, and as determined by dry weather screening results.

#### IX. Conduct ongoing screening as necessary, and upon completion of the IDDE program.

### **3.4 Construction Site Stormwater Runoff Control**

The Town must implement a program focused on controlling stormwater runoff from construction sites. The program shall minimize or eliminate erosion on site and maintain the site so that the sediment is not transported in stormwater or allowed to discharge to a water of the U.S. through the Town's MS4, as stated in part 2.3.5 of the Permit.

#### **3.4.1 Background**

The Town of Avon Planning Board has created an Erosion Control plan based on EPA's sample plan. The Planning Board has also enacted an in-house erosion control plan to deal with runoff at construction sites. The Town will continue to work on avenues in which to control runoff from existing sites.

#### **3.4.2 Best Management Practices**

- I. Site Inspection and Enforcement of Erosion and Sediment Control (ESC) Measures.
  - A. Complete written procedures of site inspections and enforcement procedures within 1 year of effective date of the Permit.
    1. Recommend standards and practices for town inspection procedures. Seek input from relevant town groups (e.g. Building, Health, Conservation, etc.)
    2. Develop inspection form that includes ESC measures and integrate them with existing Town forms.
- II. Site Plan Review
  - A. Complete written procedures of site plan review and begin implementation within 1 year of the effective date of the Permit.
    1. Include site plan review workflow chart with permit applications.
    2. Review current Town procedure regarding when a Construction General Permit (CGP) is needed.
      - a) CGP required for disturbance of 1 acre or greater
- III. Erosion and Sediment Control Ordinance

A. Adoption of requirements for construction operators to implement a sediment and erosion control program within 1 year of the effective date of the Permit.

1. Set limit of 1 acre before project requires inspection by Town official.
  - a) Coordinate limits and requirements with fill/extraction permits.
2. Update all Town forms with erosion and sediment control checklist.

#### IV. Waste Control

A. Adoption of requirements to control wastes, including but not limited to, discarded building materials, concrete truck wash out, chemicals, litter, and sanitary wastes within 1 year of the effective date of the Permit.

1. Incorporate into Town's general conditions for building permit and/or site plan review.
2. Review and modify Town bylaw to meet new requirements.

### ***3.5 Post-Construction Stormwater Management in New Development and Redevelopment***

The objective of an effective post construction stormwater management program, part 2.3.6 of the Permit, is to reduce the discharge of pollutants found in stormwater to the MS4 through the retention or treatment of stormwater after construction on new or redeveloped sites and to ensure proper maintenance of installed stormwater controls.

#### ***3.5.1 Background***

The Town of Avon has created an Erosion Control plan based on the EPA's sample control plan. The Planning Board has stringent recharge requires in their plan.

#### ***3.5.2 Best Management Practices***

##### **I. Post-Construction Ordinance**

- A. The Town shall develop or modify, as appropriate, an ordinance or other regulatory mechanism within two (2) years of the effective date of the permit.

##### **II. As-Built Plans For On-Site Stormwater Control**

- A. Require submission of electronic data for as-built drawings (e.g. PDF, AutoCAD, GIS) within 2 years of completed construction.
  - 1. O&M certification should include contact and contract information for contractors that perform O&M on the private BMPs.

##### **III. Inventory and Priority Ranking of MS4-Owned Properties That May Be Retrofitted with BMPs**

- A. Conduct detailed inventory of MS4 owned properties and rank for retrofit potential within 4 years of permit effective date.
  - 1. Inventory Town parcels for existing stormwater BMPs and identify opportunities for GI/LID retrofits.
    - a) Include schools, parks, recreation facilities, police/fire/EMS, libraries, public works, and town administrative offices.

##### **IV. Allow Green Infrastructure**

- A. Within 4 years of permit effective date, develop a report assessing existing local regulations to determine the feasibility of making green infrastructure practices allowable when appropriate site conditions exist
  - 1. Review bylaws and applications in order to incorporate green infrastructure and low impact development language as needed.
  - 2. Educate the public on green infrastructure through existing BMP retrofits/demonstration projects.
- V. Street Design and Parking Lot Guidelines
  - A. Within 4 years of permit effective date, develop a report assessing requirements that affect the creation of impervious cover. The assessment will help determine if changes to design standards for streets and parking lots can be modified to support low impact design options
    - 1. Publish street design and parking lot guidelines on stormwater website.
- VI. Ensure any stormwater controls or management practices for new development and redevelopment will prevent or minimize impacts to water quality.
  - A. Within 2 years of permit effective date, adopt, amend, or modify regulation mechanisms to meet permit requirements.
    - 1. Review rules and regulations and modify as needed. Include evaluation of subdivision/redevelopment requirements to keep stormwater runoff onsite and for long-term operations and management of private BMPs.
    - 2. Continue to implement Post-Construction Site Runoff Control Bylaw.

### ***3.6 Good Housekeeping and Pollution Prevention for Town Owned Operations***

An operations and maintenance program must be implemented by the Town for Town-owned operations. The program shall focus on preventing or reducing pollutant runoff and protecting water quality from Town operations.

### *3.6.1 Background*

The Town of Avon currently performs many Pollution Prevention and Good Housekeeping actions for Town-Owned operations. The Town continues to sweep all town-owned roadways at least once per year. The Town contracts out yearly cleaning of all catch basins and installed properly designed catch basin and oil water separators at the Highway Maintenance Facility. A consultant was hired to audit all Departments and the Town is currently addressing items noted during the audit.

### *3.6.2 Best Management Practices*

- I. Create written O&M procedures for parks and open spaces, buildings and facilities, and vehicles and equipment within 2 years of permit effective date.
  - A. Develop standards of practice for O&M of each public facility and combine in Town O&M Manual.
- II. Inventory all Town-owned parks and open spaces, buildings and facilities (including their storm drains), and vehicles and equipment within 2 years of the permit effective date.
  - A. Develop a capital improvement plan that deals with flooding prevention measures and water quality improvements.
    1. Coordinate implementation with Section 5.2.II of the Permit.
- III. Establish and implement program for repair and rehabilitation of MS4 infrastructure within 2 years of the permit effective date.
  - A. Inspect assets and assess condition to develop program
  - B. Review annual budget to set aside funding.
- IV. Stormwater Pollution Prevention Plan (SWPPP) For Maintenance Garages, Transfer Stations and Other Waste-Handling Facilities.
  - A. Develop plan within 2 years of permit effective date.
  - B. Schedule annual employee training.
    1. Look into workshop and speaking opportunities and seek formal training for all departments
  - C. Develop an asset management system to process complaints, permits, inspections, and maintenance.



- D. Continue to implement improved recycling standards and requirements.
  - 1. Advertise rigid plastic and antifreeze recycling to public. Enforce new standards for private haulers.

V. Catch Basin Cleaning

- A. Develop and implement a catch basin cleaning schedule with a goal of ensuring no catch basin is more than 50% full.
- B. Document catch basins inspected and cleaned, including total mass removed and proper disposal.
- C. Ensure that all catch basins are cleaned annually and develop reporting and record keeping procedures for cleaning and for repair of damaged catch basins.

VI. Street Sweeping Program

- A. Sweep streets (rural and uncurbed exceptions apply) a minimum of once a year in the spring.
- B. Each annual report shall include number of miles cleaned and volume or mass of material removed. Continue to implement street sweeping program.

VII. Road Salt Use Optimization Program

- A. Develop and implement winter road maintenance procedures including use and storage of salt and sand.
- B. Minimize the use of salts
  - 1. Calibrate spreaders to reduce salt use.
- C. Ensure snow is not disposed into waters.
- D. Continue working on salt reduction strategies.

## 4. WATER QUALITY BASED REQUIREMENTS

In compliance with the Clean Water Act (CWA), each state must administer a program to monitor and assess the quality of its surface and groundwater. Section 305(b) process of the CWA entails assessing each use for rivers, lakes, and coastal waters, and causes and sources of impairment are identified wherever possible. Section 303(d) of the CWA along with the regulations at 40 CFR 130.7 requires states to identify those water bodies that are not expected to meet surface water quality standards (SWQS) after the implementation of technology based controls, and prioritize them for the development of Total Maximum Daily Loads (TMDLs). A TMDL establishes the maximum amount of a pollutant that may be introduced into a water body and still ensure attainment and maintenance of water quality standards. The 303(d) *List of Impaired Waters* (303(d) List) lists each water body in one of the following five categories:

- 1) Unimpaired and not threatened for all designated uses;
- 2) Unimpaired for some uses and not assessed for others;
- 3) Insufficient information to make assessments for any uses;
- 4) Impaired or threatened for one or more uses, but not requiring the calculation of a TMDL; or
- 5) Impaired or threatened for one or more uses and requiring a TMDL.

Waters listed in Category 5 constitute the 303(d) List and are to be reviewed and approved by the EPA. An abbreviated version of *Table 1: Impaired Waters, TMDLs and Impairments* is shown below, and is also represented in Appendix B, the Notice of Intent. An overall map of the Town of Avon's stormwater system is attached as *Figure 3: Stormwater System Map*.

Name	Segment ID	Description	Size	Units	Impairment Cause
Trout Brook	MA62-07	Source northeast of Argyle Avenue and west of Conrail Line, Avon to the confluence with the Salisbury Brook forming the Salisbury Plain River, Brockton.	3.408	MILES	Fecal Coliform Oxygen, Dissolved Total Suspended Solids (TSS) Turbidity

## **4.1 Background**

These best management practices aim to improve and mitigate stormwater water quality impairments. This program will focus on impaired waters requiring a TMDL in the Taunton River Watershed, shown on *Figure 4: Town Watersheds*.

The majority of the Town is located within the Taunton River Watershed. This area can be seen on *Figure 4 – Town Watersheds*. The Taunton River Watershed has an approved TMDL for bacteria and pathogens. These impairments require the Town to follow the specific requirements listed under Appendix H to mitigate bacteria and pathogen discharges from the MS4 to the respective watershed. The Avon Public Works Department, Board of Selectmen, and Board of Health is responsible for adhering to these requirements.

The Massachusetts category 5 impaired waters requiring a TMDL in Avon are all located within the Taunton River Watershed. As shown in *Table 1 – Impaired Waters, TMDLs and Impairments*, these water bodies include the Trout Brook. The Town should prioritize sampling outfalls to these water bodies for their respective impairments, also listed in *Table 1*. The Avon Public Works Department, Board of Selectmen, and Board of Health are the primary party responsible for the BMPs to meet these TMDL requirements. The additional best management practices required to address impaired waters, TMDLs and other impairments are discussed in the following sections.

## **4.2 Additional Impairment Requirements**

### **4.2.1 Public Education and Outreach**

#### **A. Bacteria or Pathogens**

- Distribute an annual message that encourages the proper management of pet waste, including noting any existing ordinances where appropriate.
- Disseminate educational materials to dog owners at the time of issuance or renewal of dog license, or other appropriate time.
- Provide information to owners of septic systems about proper maintenance in any catchment that discharges to a water body impaired for bacteria or pathogens.

#### *4.2.2 Stormwater Management in New Development and Redevelopment*

##### *A. Solids, Oil and Grease, or Metals*

- Incorporate designs that allow for shutdown and containment where appropriate to isolate the system in the event of an emergency spill or unexpected event.
- Require any stormwater management system designed to infiltrate stormwater on commercial or industrial sites to provide the level of pollutant removal equal to or greater than the level of pollutant removal provided through the use of biofiltration of the same volume of runoff to be infiltrated, prior to infiltration.

#### *4.2.3 Good Housekeeping and Pollution Prevention*

##### *A. Solids, Oil and Grease, or Metals*

- Increase street sweeping frequency of all municipal owned streets and parking lots to a schedule determined by the Town to target areas with potential for high pollutant loads.
- Prioritize inspection and maintenance for catch basins to ensure that no sump shall be more than 50 percent full. Each annual report shall include the street sweeping schedule determined by the Town to target high pollutant loads.

#### *4.2.4 Illicit Discharge*

##### *A. Bacteria or Pathogens*

- Implement the illicit discharge program required by the Permit. Catchments draining to any water body impaired for bacteria or pathogens shall be designated either Problem Catchments or HIGH priority in implementation of the IDDE program.

At any time during the permit term, the Town may be relieved of additional requirements in Appendix H applicable to it when in compliance with the requirements in Appendix H.

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***TABLE 1***

***IMPAIRED WATERS, TMDLS AND IMPAIRMENTS***

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**Town of Avon, Massachusetts**

**Massachusetts Year 2014 Integrated List of Waters**

Impaired Waters									
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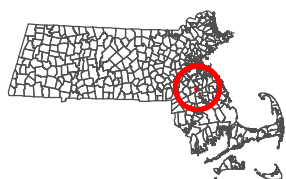
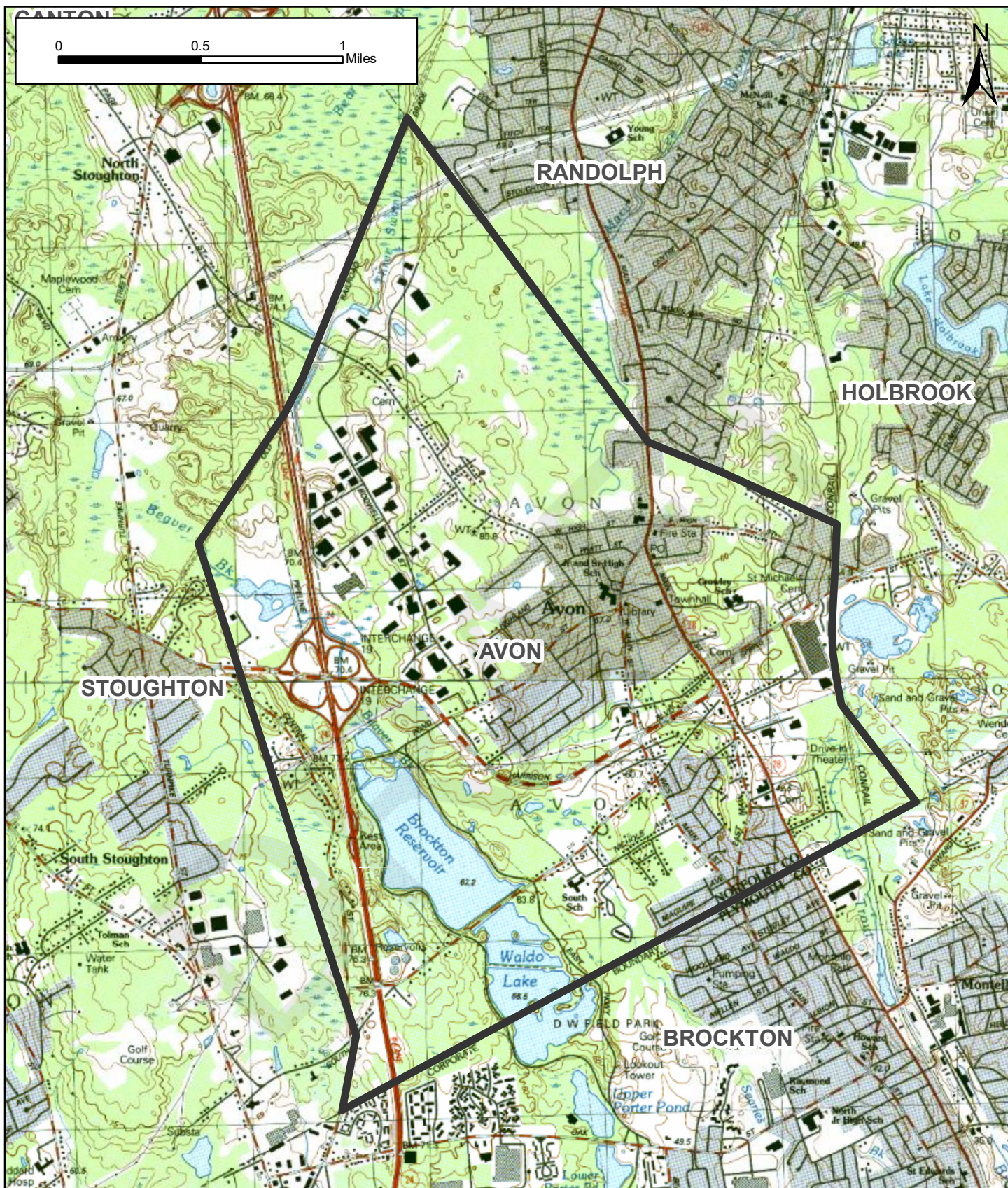
Category	Name	Segment ID	Description	Size	Units	Impairment Cause
5 - "Water Requiring a TMDL"	Trout Brook	MA62-07	Source northeast of Argyle Avenue and west of Conrail Line, Avon to the confluence with the Salisbury Brook forming the Salisbury Plain River, Brockton.	3.408	MILES	Fecal Coliform Oxygen, Dissolved Total Suspended Solids (TSS) Turbidity
						*TMDL not required (Non-pollutant)

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***FIGURE 1***  
***SYSTEM LOCUS***

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**Figure 1**  
**System Locus**  
**Avon, Massachusetts**



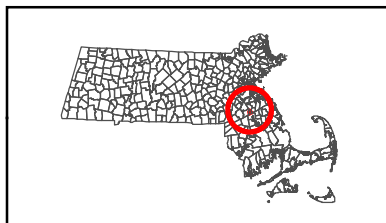
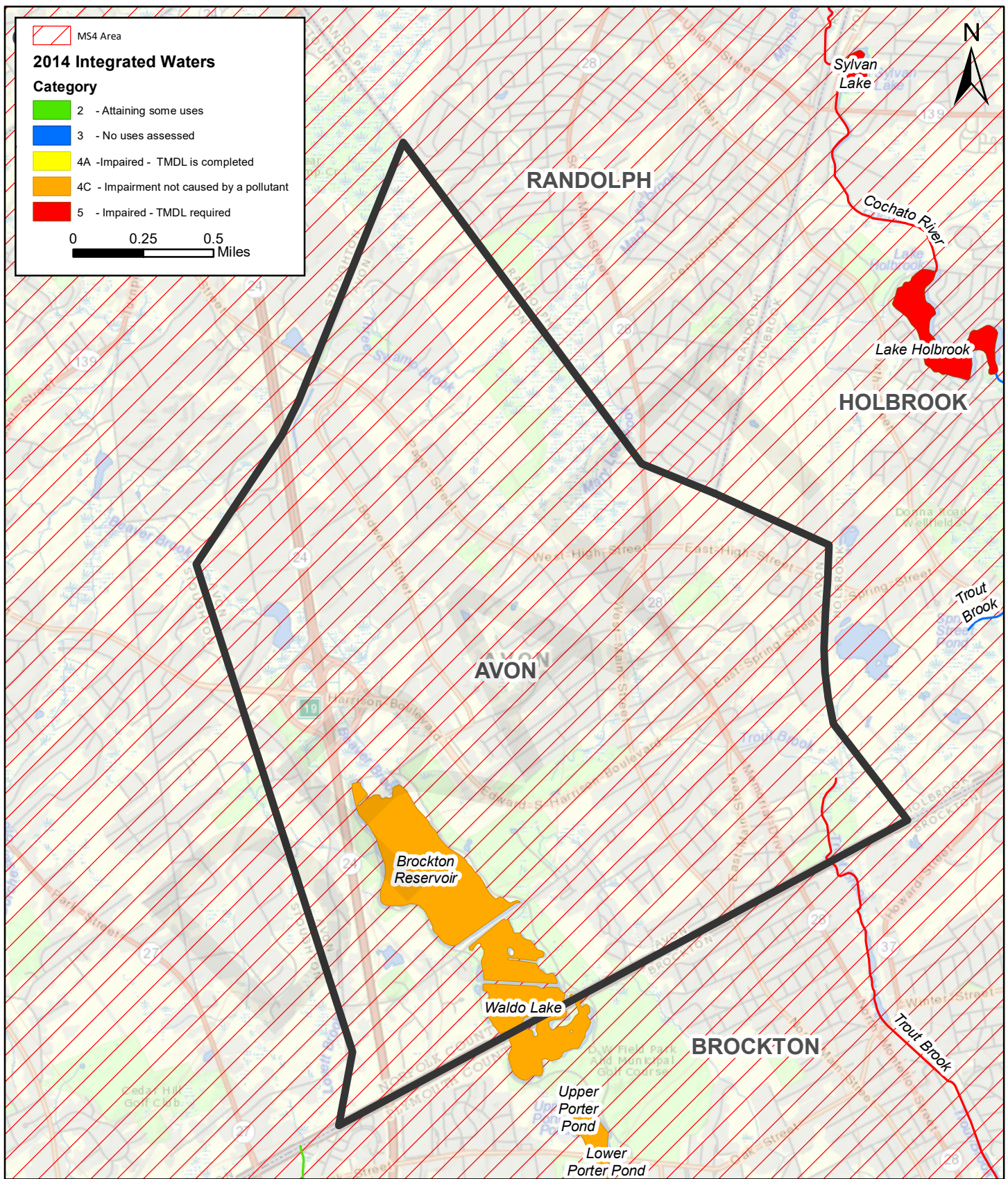


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***FIGURE 2***

***MS4 URBANIZED AREAS***

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**Figure 2**  
**MS4 Urbanized Areas**  
**Avon, Massachusetts**



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***FIGURE 3***

***TOWN WATERSHEDS***

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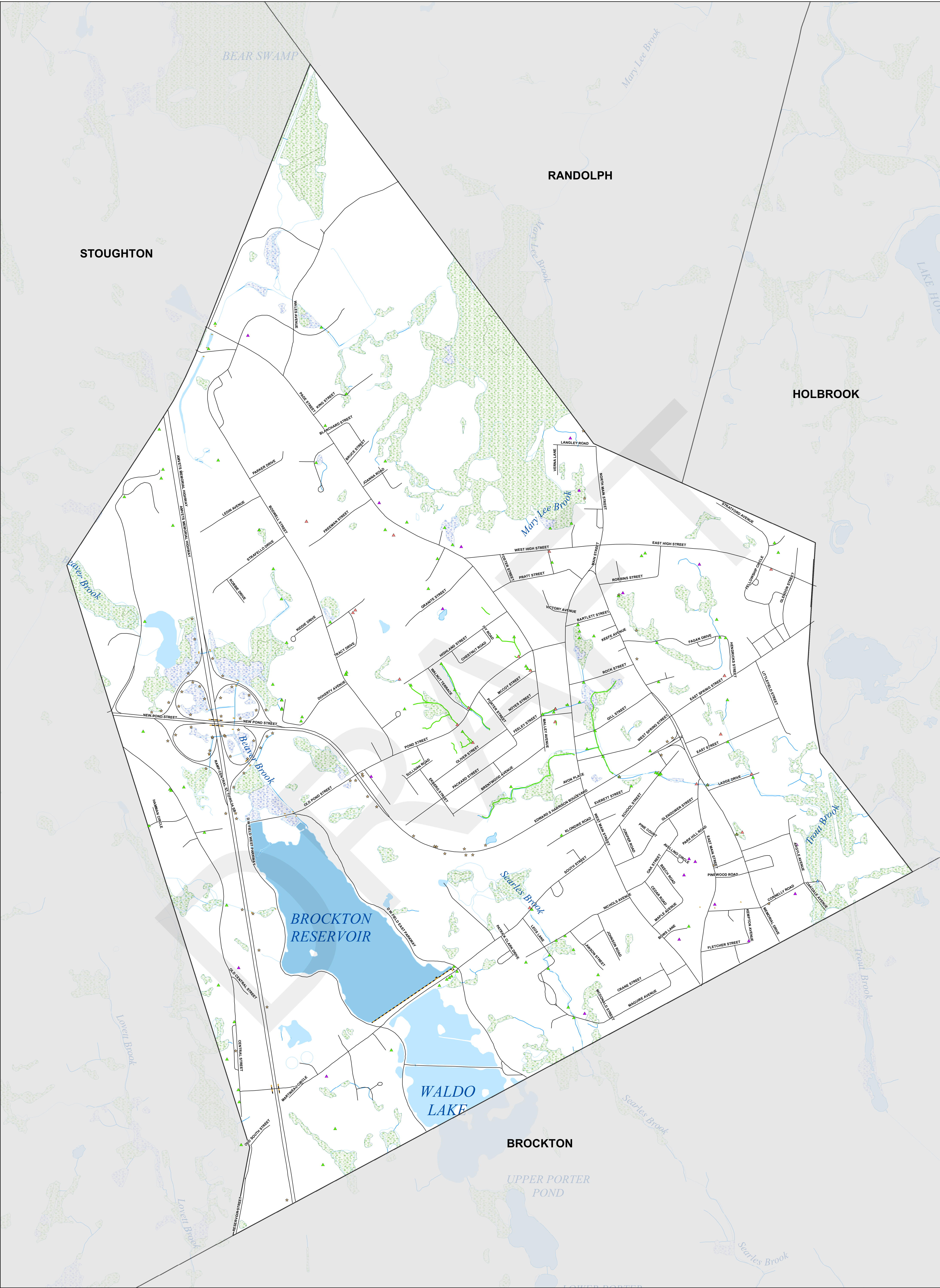


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***FIGURE 4***  
***STORMWATER SYSTEM MAP***

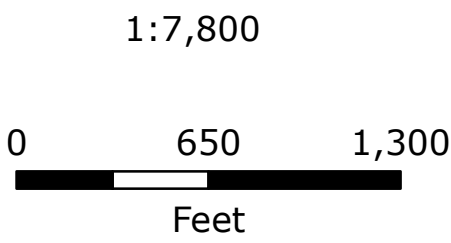
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- Legend**

  - Outfalls from Paper Maps
  - GPS'd Outfalls
  - Culvert
  - Inlet
  - MassDOT Outfall
  - Swales
  - Culverts
- Marsh/Bog
  - Wooded marsh
  - Open Water
  - Reservoir
- Shoreline
  - Hydrologic Connection
  - Wetland Limit
  - Closure Line
  - Stream, Brook

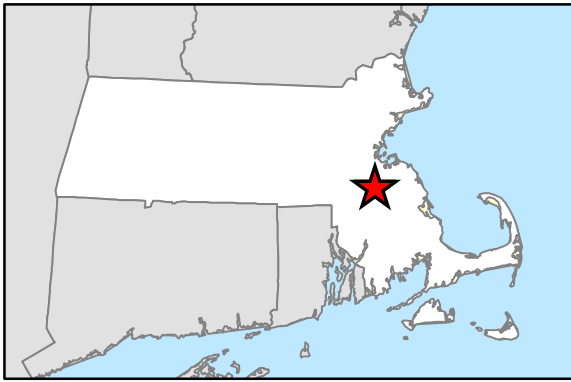


Based on MassGIS Color Orthophotography (April 2013-2014)

**TOWN OF AVON  
STORMWATER INFRASTRUCTURE**

Avon, Massachusetts

September 2018





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***APPENDIX A***

***MA MS4 HYPERLINKS AND REFERENCES***

DRAFT

## **MA MS4 General Permit Hyperlinks**

EPA MA MS4 Permit: <https://www.epa.gov/npdes-permits/massachusetts-small-ms4-general-permit>

DEP Permit Information:

<http://www.mass.gov/eea/agencies/massdep/water/wastewater/stormwater.html#8>

Town Hyperlink: [https://www.kingstonmass.org/index.asp?SEC=98244A4B-6C67-49DB-8F75-2428CB6987B9&Type=B\\_BASIC](https://www.kingstonmass.org/index.asp?SEC=98244A4B-6C67-49DB-8F75-2428CB6987B9&Type=B_BASIC)

### **MCM 1: Public Education and Outreach**

EPA's Stormwater Education Toolbox

MassDEP's Stormwater Outreach Materials

Other templates relevant to MCM 1 can be found here:

<https://www.epa.gov/npdes-permits/stormwater-tools-new-england#peo>

### **MCM 3: Illicit Discharge Detection and Elimination (IDDE) Program**

IDDE Program Template and SOPs

Other templates relevant to IDDE can be found here:

<https://www.epa.gov/npdes-permits/stormwater-tools-new-england#idde>

### **MCM 4: Construction Site Stormwater Runoff Control**

Examples and templates relevant to MCM 4, including model ordinances and site inspection templates, can be found here:

<https://www.epa.gov/npdespermits/stormwater-tools-new-england#csrc>

### **MCM 5: Post Construction Stormwater Management in New Development and Redevelopment**

Examples and templates relevant to MCM 5, including model ordinances and bylaw review templates and guidance can be found here:

<https://www.epa.gov/npdes-permits/stormwater-tools-new-england#pcsm>

### **MCM 6: Good Housekeeping and Pollution Prevention for Permittee Owned Operations**

Examples and templates relevant to MCM 6, including SOP templates for catch basin cleaning, street sweeping, vehicle maintenance, parks and open space management, winter deicing, and Stormwater Pollution Prevention Plans can be found here:

<https://www.epa.gov/npdes-permits/stormwatertools-new-england#gh>



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***APPENDIX B***  
***NOTICE OF INTENT***

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## Part I: General Conditions

### General Information

Name of Municipality or Organization:  State:

EPA NPDES Permit Number (if applicable):

### Primary MS4 Program Manager Contact Information

Name:  Title:

Street Address Line 1:

Street Address Line 2:

City:  State:  Zip Code:

Email:  Phone Number:

Fax Number:

### Other Information

Stormwater Management Program (SWMP) Location (web address or physical location, if already completed):

### Eligibility Determination

Endangered Species Act (ESA) Determination Complete?  Eligibility Criteria (check all that apply): ☐ A ☐ B ☒ C

National Historic Preservation Act (NHPA) Determination Complete?  Eligibility Criteria (check all that apply): ☒ A ☐ B ☐ C

☒ Check the box if your municipality or organization was covered under the 2003 MS4 General Permit

### MS4 Infrastructure (if covered under the 2003 permit)

Estimated Percent of Outfall Map Complete?  If 100% of 2003 requirements not met, enter an estimated date of completion (MM/DD/YY):

Web address where MS4 map is published:

If outfall map is unavailable on the internet an electronic or paper copy of the outfall map must be included with NOI submission (see section V for submission options)

### Regulatory Authorities (if covered under the 2003 permit)

<b>Illicit Discharge Detection and Elimination (IDDE) Authority Adopted?</b> (Part II, III, IV or V, Subpart B.3.(b.) of 2003 permit)	<input type="text" value="No"/>	Effective Date or Estimated Date of Adoption (MM/DD/YY):	<input type="text" value="06/30/19"/>
<b>Construction/Erosion and Sediment Control (ESC) Authority Adopted?</b> (Part II, III, IV or V, Subpart B.4.(a.) of 2003 permit)	<input type="text" value="No"/>	Effective Date or Estimated Date of Adoption (MM/DD/YY):	<input type="text" value="06/30/19"/>
<b>Post- Construction Stormwater Management Adopted?</b> (Part II, III, IV or V, Subpart B.5.(a.) of 2003 permit)	<input type="text" value="No"/>	Effective Date or Estimated Date of Adoption (MM/DD/YY):	<input type="text" value="06/30/19"/>

## Notice of Intent (NOI) for coverage under Small MS4 General Permit

### Part II: Summary of Receiving Waters

Please list the waterbody segments to which your MS4 discharges. For each waterbody segment, please report the number of outfalls discharging into it and, if applicable, any impairments.

Massachusetts list of impaired waters: [Massachusetts 2014 List of Impaired Waters- http://www.mass.gov/eea/docs/dep/water/resources/07v5/14list2.pdf](http://www.mass.gov/eea/docs/dep/water/resources/07v5/14list2.pdf)

Check off relevant pollutants for discharges to impaired waterbodies (see above 303(d) lists) without an approved TMDL in accordance with part 2.2.2.a of the permit. List any other pollutants in the last column, if applicable.

Waterbody segment that receives flow from the MS4	Number of outfalls into receiving water segment	Chloride	Chlorophyll-a	Dissolved Oxygen/ DO Saturation	Nitrogen	Oil & Grease/ PAH	Phosphorus	Solids/ TSS/ Turbidity	E. coli	Enterococcus	Other pollutant(s) causing impairments
Trout Brook (MA62-07)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fecal coliform
Brockton Reservoir (MA62023)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(Non-Native Aquatic Plants*
Waldo Lake (MA62201)	6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(Non-Native Aquatic Plants*
Tributary to Trout Brook	14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mary Lee Brook	6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Beaver Brook	8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Threeswamp Brook	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Searless Brook	7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed wetlands	49	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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Click to lengthen table

## Notice of Intent (NOI) for coverage under Small MS4 General Permit

### Part III: Stormwater Management Program Summary

Identify the Best Management Practices (BMPs) that will be employed to address each of the six Minimum Control Measures (MCMS). For municipalities/organizations whose MS4 discharges into a receiving water with an approved Total Maximum Daily Load (TMDL) and applicable waste load allocation (WLA), identify any additional BMPs employed to specifically support the achievement of the WLA in the TMDL section at the end of Part III.

For each MCM, list each existing or proposed BMP by category and provide a brief description, responsible parties/departments, measurable goals, and the year the BMP will be employed (public education and outreach BMPs also require a target audience).

#### MCM 1: Public Education and Outreach

BMP ID	BMP Media/Category	BMP Description	Targeted Audience	Responsible Department/ Parties	Measurable Goal	Beginning Year of BMP Implementation
1A	Multi-media methods (including social media and print materials)	Education and outreach on stormwater management topics of significance in Avon (including proper pet waste management, proper maintenance of septic systems, proper disposal of leaf litter and proper use of pesticides and fertilizers). Educational topics will include but are not limited to those in EPA's Permit Part 2.3.2.d.i  Education and outreach on topics required by Appendices F and H.	Residents	Continue with Selectmen, Public Works, Board of Health	Distribute a minimum of two (2) educational messages spaced at least a year apart by PY5 (June 30, 2023) as well as any that may be required by Appendices F and H	2018 (PY1)

**Notice of Intent (NOI) for coverage under Small MS4 General Permit**

<b>BMP ID</b>	<b>BMP Media/Category</b>	<b>BMP Description</b>	<b>Targeted Audience</b>	<b>Responsible Department/ Parties</b>	<b>Measurable Goal</b>	<b>Beginning Year of BMP Implementation</b>
1B	Multi-media methods (including web and print materials)	Education and outreach on stormwater management topics of significance in Avon (including proper lawn maintenance, proper disposal of leaf litter and parking lot sweeping). Educational topics will include but are not limited to those in EPA's Permit Part 2.3.2.d.ii.  Education and outreach on topics required by Appendices F and H.	Businesses, Institutions, and Commercial Facilities	Continue with Selectmen, Public Works, Board of Health	Distribute a minimum of two (2) educational messages spaced at least a year apart by PY5 (June 30, 2023) as well as any that may be required by Appendices F and H	2019 (PY2)
1C	Multi-media methods (including web and print materials)	Education and outreach on stormwater management topics of significance in Avon (including proper erosion and sedimentation control, permit requirements, and design standards). Educational topics will include but are not limited to those in EPA's Permit Part 2.3.2.d.iii	Developers (Construction)	Continue with Selectmen, Public Works, Board of Health	Distribute a minimum of two (2) educational messages spaced at least a year apart by PY5 (June 30, 2023)  Distribute three annual messages (Spring, Summer, Fall) by PY5 (June 20, 2023)	2018 (PY1)

**Notice of Intent (NOI) for coverage under Small MS4 General Permit**

<b>BMP ID</b>	<b>BMP Media/Category</b>	<b>BMP Description</b>	<b>Targeted Audience</b>	<b>Responsible Department/ Parties</b>	<b>Measurable Goal</b>	<b>Beginning Year of BMP Implementation</b>
1D	Multi-media methods (including web and print materials)	Education and outreach on stormwater management topics of significance in Avon (including pollution prevention, illicit discharges, information about the Multi-Sector General Permit). Educational topics will include but are not limited to those in EPA's Permit Part 2.3.2.d.iv	Industrial Facilities	Continue with Selectmen, Public Works, Board of Health	Distribute a minimum of two (2) educational messages spaced at least a year apart by PY5 (June 30, 2023)	2019 (PY2)

**Notice of Intent (NOI) for coverage under Small MS4 General Permit****Part III: Stormwater Management Program Summary****MCM 2: Public Involvement and Participation**

<b>BMP ID</b>	<b>BMP Category</b>	<b>BMP Description</b>	<b>Responsible Department/Parties</b>	<b>Measurable Goal</b>	<b>Beginning Year of BMP Implementation</b>
2A	Public Review	SWMP review (Plan and reports available on web and at public meetings)	Continue with Public Works; annual Board of Selectman Review	Annually provide the public with an opportunity to participate in the review and implementation of the SWMP	2018 (PY1)
2B	Public Participation	Provide opportunities for public involvement and participation in Avon's stormwater program (including clean up events). Specific activities, schedule, and lead departments are included in the SWMP.	Continue with Board of Health with Public Works Assistance	Ongoing compliance	2018 (PY1)

## Notice of Intent (NOI) for coverage under Small MS4 General Permit

### Part III: Stormwater Management Program Summary

#### MCM 3: Illicit Discharge Detection and Elimination (IDDE)

BMP ID	BMP Category	BMP Description	Responsible Department/Parties	Measurable Goal	Beginning Year of BMP Implementation
3A	IDDE Ordinance/Bylaw	Complete. Continue to enforce and update if necessary.	Public Works	Track illicit discharges identified and removed annually.	2018 (PY1)
3B	SSO Inventory	Develop SSO inventory in accordance of permit conditions.  Not applicable – no sewer in Avon.	N/A	Not applicable – no sewer in Avon.	N/A
3C	Storm sewer system map	Outfall Inventory Complete. Improve map during IDDE Program implementation	Public Works	Update map within two (2) years of effective date of permit (i.e. June 30, 2020) and complete full system map 10 years after effective date of permit (i.e. June 30, 2028)	2018 (PY1)
3D	Written IDDE program	Develop written IDDE Plan.	Public Works	Complete within one (1) year of the effective date of permit (i.e. June 30, 2019) and update as required (ongoing)	2018 (PY1)



**Notice of Intent (NOI) for coverage under Small MS4 General Permit**

<b>BMP ID</b>	<b>BMP Category</b>	<b>BMP Description</b>	<b>Responsible Department/Parties</b>	<b>Measurable Goal</b>	<b>Beginning Year of BMP Implementation</b>
3E-1	Assessment and Priority Ranking of Outfalls & Interconnections	<p>Outfall/ Interconnection Inventory and Initial Ranking as part of BMP 3D.</p> <p>Include applicable requirements of bacteria/pathogen TMDL for Taunton River Watershed included in EPA Permit Appendix F</p>	Public Works	Complete within one (1) year of the effective date of permit (i.e. June 30, 2019) and update as necessary (ongoing)	2018 (PY1)
3E-2	Assessment and Priority Ranking of Outfalls & Interconnections	<p>Dry Weather Outfall Screening &amp; Sampling in accordance with IDDE Plan and permit conditions</p> <p>Include applicable requirements of bacteria/pathogen TMDL for Taunton River Watershed included in EPA Permit Appendix F</p>	Public Works	<p>Complete three (3) years after effective date of permit (i.e. June 30, 2021). Track # of illicit discharges identified &amp; volume removed annually. Summarize screening/ sampling results annually.</p>	2018 (PY1)

**Notice of Intent (NOI) for coverage under Small MS4 General Permit**

<b>BMP ID</b>	<b>BMP Category</b>	<b>BMP Description</b>	<b>Responsible Department/Parties</b>	<b>Measurable Goal</b>	<b>Beginning Year of BMP Implementation</b>
3E-3	Assessment and Priority Ranking of Outfalls & Interconnections	Catchment Investigations according to IDDE Program and permit conditions  Consider requirements of bacteria/pathogen TMDL for Taunton River Watershed included in EPA Permit Appendix F	Public Works	Complete 10 years after effective date of permit (i.e. June 30, 2028). Track # and percentage of MS4 catchments evaluated annually. Track # of illicit discharges identified & volume removed annually. Summarize screening/sampling results annually.	2019 (PY2)
3F	Employee Training	Train relevant employees on IDDE implementation	Public Works	Train annually. Track employees trained, training topic, date/time, and materials presented.	2018 (PY1)
3G	Nitrogen Source and Phosphorus Source Identification Reports	Prepare reports in accordance with EPA MS4 Permit Appendix H	Public Works	Submit final reports to EPA with Permit Year 4 Annual Report (i.e. October 1, 2022).	2019 (PY2)

**Notice of Intent (NOI) for coverage under Small MS4 General Permit****Part III: Stormwater Management Program Summary****MCM 4: Construction Site Stormwater Runoff Control**

<b>BMP ID</b>	<b>BMP Category</b>	<b>BMP Description</b>	<b>Responsible Department/Parties</b>	<b>Measurable Goal</b>	<b>Beginning Year of BMP Implementation</b>
4A	Construction Bylaw and Regulations	Modify local bylaw and regulations, if necessary, to contain new MS4 provisions per section 2.3.5.	Continue with Planning Board/ Public Works	Review current procedures and modify if necessary within one (1) year of permit effective date (i.e. June 30, 2019).	2018 (PY1)
4B	Construction Policy and Procedures	Develop and implement written procedures for site inspections and enforcement procedures per section 2.3.5.	Continue with Planning Board/ Public Works	Review current procedures and modify if necessary within one (1) year of permit effective date (i.e. June 30, 2019)	2018 (PY1)

## Notice of Intent (NOI) for coverage under Small MS4 General Permit

### Part III: Stormwater Management Program Summary

#### MCM 5: Post-Construction Stormwater Management in New Development and Redevelopment

BMP ID	BMP Category	BMP Description	Responsible Department/Parties	Measurable Goal	Beginning Year of BMP Implementation
5A	Post-Construction Bylaw and Regulations	Modify local bylaw and regulations to contain new MS4 provisions per EPA Permit Section 2.3.6.a.  Include applicable requirements of EPA Permit Appendix H	Continue with Planning Board/ Public Works	Modify existing bylaw and/or regulations if necessary within two (2) years of permit effective date (i.e. June 30, 2020)	2019 (PY 1 / 2)
5B	Assess street and parking lot guidelines	Develop a report assessing requirements that affect the creation of impervious cover. The assessment will help determine if changes to design standards for streets and parking lots can be modified to support low impact design options.	Public Works	Complete report no later than (4) years of permit effective date (i.e. June 30, 2022)	2020 (PY3)
5C	Assess allowing green infrastructure	Develop a report assessing existing local regulations to determine the feasibility of making green infrastructure practices allowable when appropriate site conditions exist	Public Works	Complete report no later than (4) years of permit effective date (i.e. June 30, 2022)	2020 (PY3)

**Notice of Intent (NOI) for coverage under Small MS4 General Permit**

<b>BMP ID</b>	<b>BMP Category</b>	<b>BMP Description</b>	<b>Responsible Department/Parties</b>	<b>Measurable Goal</b>	<b>Beginning Year of BMP Implementation</b>
5D	Retrofit Feasibility Assessment	<p>Conduct detailed inventory of Town-owned properties and rank for retrofit potential</p> <p>Include applicable requirements of EPA Permit Appendix H related to addressing nitrogen and phosphorus through structural BMPs.</p>	Public Works	<p>Complete report no later than four (4) years of permit effective date (i.e. June 30, 2022). Beginning in Year 5 (i.e. starting July 1, 2022) keep running list of at least five (5) retrofit sites.</p> <p>Install one structural BMP by end of Permit Year 6 (i.e. June 30, 2024) in accordance with EPA Permit Appendix H.</p> <p>Install other structural BMPs per schedule developed as part of retrofit feasibility assessment, if applicable.</p>	2020 (PY3)

## Notice of Intent (NOI) for coverage under Small MS4 General Permit

### Part III: Stormwater Management Program Summary

#### MCM 6: Municipal Good Housekeeping and Pollution Prevention

BMP ID	BMP Category	BMP Description	Responsible Department/Parties	Measurable Goal	Beginning Year of BMP Implementation
6A	Operation & Maintenance Program	Inventory and create O&M procedures for all permittee-owned <b>parks and open spaces, buildings and facilities</b> (including their storm drains), and <b>vehicles and equipment</b>  Include applicable requirements of EPA Permit Appendix H	Public Works	Complete two (2) years after permit effective date (i.e. June 30, 2020), implement in following years	2019 (PY2)
6B	Operation & Maintenance Program	Establish and implement program for repair and rehabilitation of <b>MS4 infrastructure</b>  Include applicable requirements of EPA Permit Appendix H	Public Works	Complete two (2) years after permit effective date (i.e. June 30, 2020), implement in following years	2019 (PY2)
6C	Stormwater Pollution Prevention Plans (SWPPP)	Develop and implement SWPPPs for the DPW facility and transfer station	Public Works	Complete SWPPPs within two (2) years of permit effective date (i.e. June 30, 2020), implement in following years	2019 (PY2)

**Notice of Intent (NOI) for coverage under Small MS4 General Permit**

<b>BMP ID</b>	<b>BMP Category</b>	<b>BMP Description</b>	<b>Responsible Department/Parties</b>	<b>Measurable Goal</b>	<b>Beginning Year of BMP Implementation</b>
6D-1	Operation & Maintenance Program	Implement procedures to optimize catch basin cleaning developed under BMP 6B	Public Works	Track frequency and material quantity of catch basin cleaning in town annually.  In first Annual Report and in SWMP, document plan for optimizing catch basin cleaning.	2018 (PY1)
6D-2	Operation & Maintenance Program	Implement procedures for street and parking lot sweeping developed under BMP 6A as well as anything that may be required by EPA Permit Appendix H.	Public Works	Annually track number of miles cleaned or the volume or mass of material removed.	2018 (PY1)
6D-3	Operation & Maintenance Program	Implement procedures for use and storage of deicing materials developed under BMP 6A	Public Works	Implement program for winter road maintenance throughout permit term.	2018 (PY1)
6D-4	Operation & Maintenance Program	Implement procedures to inspect and maintain Town-owned structural stormwater BMPs	Public Works	Develop an inventory of Town-owned BMPs within two (2) years of effective date of permit (i.e. complete by June 30, 2020). Report on inspection and maintenance conducted annually.	2018 (PY1)

## Notice of Intent (NOI) for coverage under Small MS4 General Permit

## Part III: Stormwater Management Program Summary (continued)

## Actions for Meeting Total Maximum Daily Load (TMDL) Requirements

Use the drop-down menus to select the applicable TMDL, action description to meet the TMDL requirements, and the responsible department/parties. If no options are applicable, or more than one, **enter your own text to override drop-down menus.**

[illegible]



### Part III: Stormwater Management Program Summary (continued)

Use the drop-down menus to select the pollutant causing the water quality limitation and enter the waterbody ID(s) experiencing excursions above water quality standards for that pollutant. Choose the action description from the dropdown menu and indicate the responsible party. If no options are applicable, or more than one, **enter your own text to override drop-down menus.**

[illegible]

**Part IV: Notes and additional information**

Use the space below to indicate the part(s) of 2.2.1 and 2.2.2 that you have identified as not applicable to your MS4 because you do not discharge to the impaired water body or a tributary to an impaired water body due to nitrogen or phosphorus. Provide all supporting documentation below or attach additional documents if necessary. Also, provide any additional information about your MS4 program below.

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**Part V: Certification**

*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

Name:

Title:

Signature:

Date:

*[To be signed according to Appendix B, Subparagraph B.11, Standard Conditions]*

Note: When prompted during signing, save the document under a new file name

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***APPENDIX C***  
***PERMIT SCHEDULE***

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**MS4 Permit  
Draft Schedule  
Town of Avon, Massachusetts**

**July 2018** – MS4 Permit effective date to coincide with start of FY18

- **September 29, 2018** – Submit Updated NOI (within 90 days of effective date)

**July 2019** – Items due within 1 year of effective date

- Submit Updated Stormwater Management Plan
- Additional Mapping – update stormwater system GIS for connectivity (as needed)
- Written IDDE Plan, identify catchments contributing to areas with Bacteria and Nitrogen as High Priority
- Inventory Town Facilities
- Develop O&M for Town Facilities
- Education/Outreach – Two educational messages to each of the 4 audiences over 5 years
- Additional Education/Outreach (x2 for *Impaired Water Requirements*)\*\*
  - Bacteria and Pathogens: Targeting Dog Waste / Septic Systems – Trout Brook, Taunton River Watershed
- Additional BMPs for Waterbodies with Impairment by Solids \*\* – Trout Brook
  - New or Redevelopment of Commercial Industrial properties draining to the waterbodies shall incorporate stormwater BMPs that can be shutdown/isolated in event of a spill/release. EPA encourages requirements for stormwater infiltration and pollutant removal BMPs.
  - Evaluate need for increased frequency of street sweeping of municipal streets and parking lots in areas with potential for higher pollutant loads.
  - Evaluate need for increased frequency of catch basin inspections and cleaning if excessive sediment/debris loadings observed.
- Public Participation
- Annual Training

**July 2020** – Items due within 2 years of effective date

- SWPPP for Appropriate Facilities
- SPCC Plan where appropriate
- Parks Maintenance Plan
- Ongoing Outfall Sampling (wet & dry) / Inspections / Update Mapping
- Updated Ordinance for Phosphorus\*
- Education/Outreach – Two educational messages to each of the 4 audiences over 5 years
- Additional Education & Outreach (x2 for *Impaired Water Requirements*)\*\*
  - Bacteria: Targeting Dog Waste / Septic Systems for – Trout Brook, Taunton River Watershed



- Additional BMPs for Waterbodies with Impairment by Solids \*\* – Trout Brook
  - New or Redevelopment BMPs targeting solids
  - Continue to evaluate street sweeping and catch basin cleaning frequency.
- Public Participation
- Annual Training

**July 2021** – Items due within 3 years of effective date

- Revisions to Stormwater Bylaw - Construction Site Stormwater Runoff Control
- Draft regulations to promote green infrastructure – Post-Construction Management
- Ongoing Outfall Sampling (wet & dry) / Inspections / Update Mapping
- Education/Outreach – Two educational messages to each of the 4 audiences over 5 years
- Additional Education & Outreach (x2 for Impaired Water Requirements)\*\*
  - Bacteria: Targeting Dog Waste / Septic Systems for – Trout Brook, Taunton River Watershed
- Additional BMPs for Waterbodies with Impairment by Solids \*\* – Trout Brook
  - New or Redevelopment BMPs targeting solids
  - Continue to evaluate street sweeping and catch basin cleaning frequency.
- Public Participation
- Annual Training

**July 2022** – Items due within 4 years of effective date

- Revisions to Stormwater Bylaw - Construction Site Stormwater Runoff Control
- Draft regulations to reduce impervious cover – Post-Construction Management
- Ongoing Outfall Sampling (wet & dry) / Inspections / Update Mapping
- Education/Outreach – Two educational messages to each of the 4 audiences over 5 years
- Additional Education & Outreach (x2 for Impaired Water Requirements)\*
  - Bacteria: Targeting Dog Waste / Septic Systems for – Trout Brook, Taunton River Watershed
- Additional BMPs for Waterbodies with Impairment by Solids \*\* – Trout Brook
  - New or Redevelopment BMPs targeting solids
  - Continue to evaluate street sweeping and catch basin cleaning frequency.
- Public Participation
- Annual Training

**July 2023** – Permit Length (5 years)

- Inventory/Priority Ranking of LID retrofits on Town-Owned Property – Post-Construction Management
- System development for tracking Impervious Area – Post-Construction Management
- Ongoing Outfall Sampling (wet & dry) / Inspections / Update Mapping
- Education/Outreach – Two educational messages to each of the 4 audiences over 5 years
- Additional Education & Outreach (x2 for Impaired Water Requirements)\*\*



- Bacteria: Targeting Dog Waste / Septic Systems for – Trout Brook, Taunton River Watershed
- Additional BMPs for Waterbodies with Impairment by Solids \*\* – Trout Brook
  - New or Redevelopment BMPs targeting solids
  - Continue to evaluate street sweeping and catch basin cleaning frequency.
- Public Participation
- Annual Training

*\*\*Additional requirements for Water Quality Assessment are required due to documented bacteria and turbidity. (see Appendix H, sections III and V.)*

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***APPENDIX D***

***ENDANGERED SPECIES AND CRITICAL HABITATS PROTECTION DOCUMENTS***

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# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

New England Field Office  
70 Commercial Street, Suite 300  
Concord, NH 03301-5087  
<http://www.fws.gov/newengland>



January 8, 2018

To Whom It May Concern:

This project was reviewed for the presence of federally listed or proposed, threatened or endangered species or critical habitat per instructions provided on the U.S. Fish and Wildlife Service's New England Field Office website:

<http://www.fws.gov/newengland/EndangeredSpec-Consultation.htm> (accessed January 2018)

Based on information currently available to us, no federally listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the project area(s). Preparation of a Biological Assessment or further consultation with us under section 7 of the Endangered Species Act is not required. No further Endangered Species Act coordination is necessary for a period of one year from the date of this letter, unless additional information on listed or proposed species becomes available.

Thank you for your cooperation. Please contact David Simmons of this office at 603-227-6425 if we can be of further assistance.

Sincerely yours,

Thomas R. Chapman  
Supervisor  
New England Field Office



## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
New England Ecological Services Field Office  
70 Commercial Street, Suite 300  
Concord, NH 03301-5094  
Phone: (603) 223-2541 Fax: (603) 223-0104  
<http://www.fws.gov/newengland>



In Reply Refer To:  
Consultation Code: 05E1NE00-2019-SLI-2117  
Event Code: 05E1NE00-2019-E-05325  
Project Name: Avon MS4

June 27, 2019

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

### To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan ([http://www.fws.gov/windenergy/eagle\\_guidance.html](http://www.fws.gov/windenergy/eagle_guidance.html)). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

## Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**New England Ecological Services Field Office**  
70 Commercial Street, Suite 300  
Concord, NH 03301-5094  
(603) 223-2541

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## Project Summary

Consultation Code: 05E1NE00-2019-SLI-2117

Event Code: 05E1NE00-2019-E-05325

Project Name: Avon MS4

Project Type: LAND - DRAINAGE

Project Description: Avon Stormwater MS4

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/42.1284933658477N71.04847604634139W>



Counties: Norfolk, MA | Plymouth, MA

## Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## Mammals

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>	Threatened

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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***APPENDIX E***

***MA MS4 GENERAL PERMIT - APPENDIX D - HISTORIC PROPERTIES DOCUMENTS***

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## **Appendix D**

### **National Historic Preservation Act Guidance**

#### **Background**

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to take into account the effects of Federal “undertakings” on historic properties that are either listed on, or eligible for listing on, the National Register of Historic Places. The term federal “undertaking” is defined in the NHPA regulations to include a project, activity, or program of a federal agency including those carried out by or on behalf of a federal agency, those carried out with federal financial assistance, and those requiring a federal permit, license or approval. See 36 CFR 800.16(y). Historic properties are defined in the NHPA regulations to include prehistoric or historic districts, sites, buildings, structures, or objects that are included in, or are eligible for inclusion in, the National Register of Historic Places. This term includes artifacts, records, and remains that are related to and located within such properties. See 36 CFR 800.16(1).

EPA’s issuance of a National Pollutant Discharge Elimination System (NPDES) General Permit is a federal undertaking within the meaning of the NHPA regulations and EPA has determined that the activities to be carried out under the general permit require review and consideration, in order to be in compliance with the federal historic preservation laws and regulations. Although individual submissions for authorization under the general permit do not constitute separate federal undertakings, the screening processes provides an appropriate site-specific means of addressing historic property issues in connection with EPA’s issuance of the permit. To address any issues relating to historic properties in connection with the issuance of this permit, EPA has included a screening process for applicants to identify whether properties listed or eligible for listing on the National Register of Historic Places are within the path of their discharges or discharge-related activities (including treatment systems or any BMPs relating to the discharge or treatment process) covered by this permit.

Applicants seeking authorization under this general permit must comply with applicable, State, Tribal, and local laws concerning the protection of historic properties and places and may be required to coordinate with the State Historic Preservation Officer (SHPO) and/or Tribal Historic Preservation Officer (THPO) and others regarding effects of their discharges on historic properties.

#### **Activities with No Potential to Have an Effect on Historic Properties**

A determination that a federal undertaking has no potential to have an effect on historic properties fulfills an agency’s obligations under NHPA. EPA has reason to believe that the vast majority of activities authorized under this general permit will have no potential effects on historic properties. This permit typically authorizes discharges from existing facilities and requires control of the pollutants discharged from the facility. EPA does not anticipate effects on historic properties from the pollutants in the authorized discharges. Thus, to the extent EPA’s issuance of this general permit authorizes discharges of such constituents, confined to existing channels, outfalls or natural drainage areas, the permitting action does not have the potential to cause effects on historical properties.

In addition, the overwhelming majority of sources covered under this permit will be facilities that are seeking renewal of previous permit authorization. These existing dischargers should have already addressed NHPA issues in the previous general permit as they were required to certify that they were either not affecting historic properties or they had obtained written agreement from



the applicable SHPO or THPO regarding methods of mitigating potential impacts. To the extent this permit authorizes renewal of prior coverage without relevant changes in operations the discharge has no potential to have an effect on historic properties.

### **Activities with Potential to Have an Effect on Historic Properties**

EPA believes this permit may have some potential to have an effect on historic properties the applicant undertakes the construction and/or installation of control measures that involve subsurface disturbance that involves less than 1 acre of land. (Ground disturbances of 1 acre or more require coverage under the Construction General Permit.) Where there is disturbance of land through the construction and/or installation of control measures, there is a possibility that artifacts, records, or remains associated with historic properties could be impacted. Therefore, if the applicant is establishing new or altering existing control measures to manage their discharge that will involve subsurface ground disturbance of less than 1 acre, they will need to ensure (1) that historic properties will not be impacted by their activities or (2) that they are in compliance with a written agreement with the SHPO, THPO, or other tribal representative that outlines all measures the applicant will carry out to mitigate or prevent any adverse effects on historic properties.

### ***Examples of Control Measures Which Involve Subsurface Disturbance***

The type of control measures that are presumptively expected to cause subsurface ground disturbance include:

- Dikes
- Berms
- Catch basins, drainage inlets
- Ponds, bioretention areas
- Ditches, trenches, channels, swales
- Culverts, pipes
- Land manipulation; contouring, sloping, and grading
- Perimeter Drains
- Installation of manufactured treatment devices

EPA cautions applicants that this list is non-inclusive. Other control measures that involve earth disturbing activities that are not on this list must also be examined for the potential to affect historic properties.

### **Certification**

Upon completion of this screening process the applicant shall certify eligibility for this permit using one of the following criteria on their Notice of Intent for permit coverage:

**Criterion A:** The discharges do not have the potential to cause effects on historic properties.

**Criterion B:** A historic survey was conducted. The survey concluded that no historic properties are present. Discharges do not have the potential to cause effects on historic properties.

**Criterion C:** The discharges and discharge related activities have the potential to have an effect on historic properties, and the applicant has obtained and is in compliance with a written agreement with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO), or other tribal representative that outlines measures the applicant will carry out to mitigate or prevent any adverse effects on historic properties.

Authorization under the general permit is available only if the applicant certifies and documents permit eligibility using one of the eligibility criteria listed above. Small MS4s that cannot meet any of the eligibility criteria in above must apply for an individual permit.

### Screening Process

Applicants or their consultant need to answer the questions and follow the appropriate procedures below to assist EPA in compliance with 36 CFR 800.

**Question 1:** Is the facility an existing facility authorized by the previous permit or a new facility and the applicant is not undertaking any activity involving subsurface land disturbance less than an acre?

**YES** - The applicant should certify that fact in writing and file the statement with the EPA. This certification must be maintained as part of the records associated with the permit.

**The applicant should certify eligibility for this permit using Criterion A on their Notice of Intent for permit coverage.** The applicant does not need to contact the state Historic Commission. Based on that statement, EPA will document that the project has "no potential to cause effects" (36 CFR 800.3(a)(1)). There are no further obligations under the Section 106 regulations.

**NO**- Go to Question 2.

**Question 2:** Is the property listed in the National Register of Historic Places or have prior surveys or disturbances revealed the existence of a historic property or artifacts?

**NO** - The applicant should certify that fact in writing and file the statement with the EPA. This certification must be maintained as part of the records associated with the permit.

**The applicant should certify eligibility for this permit using Criterion B on their Notice of Intent for permit coverage.** The applicant does not need to contact the state Historic Commission. Based on that statement, EPA will document that the project has "no potential to cause effects" (36 CFR 800.3(a)(1)). There are no further obligations under the Section 106 regulations.

**YES** - The applicant or their consultant should prepare a complete information submittal to the SHPO. The submittal consists of:

- Completed Project Notification Form- forms available at <http://www.sec.state.ma.us/mhc/mhcform/formidx.htm>;

- USGS map section with the actual project boundaries clearly indicated; and
- Scaled project plans showing existing and proposed conditions.

(1) Please note that the SHPO does not accept email for review. Please mail a paper copy of your submittal (Certified Mail, Return Receipt Requested) or deliver a paper copy of your submittal (and obtain a receipt) to:

State Historic Preservation Officer  
Massachusetts Historical Commission  
220 Morrissey Blvd.  
Boston MA 02125.

(2) Provide a copy of your submittal and the proof of MHC delivery showing the date MHC received your submittal to:

NPDES Permit Branch Chief  
US EPA Region 1 (OEP06-1)  
5 Post Office Square, Suite 100  
Boston MA 02109-3912.

The SHPO will comment within thirty (30) days of receipt of complete submittals, and may ask for additional information. Consultation, as appropriate, will include EPA, the SHPO and other consulting parties (which includes the applicant). The steps in the federal regulations (36 CFR 800.2 to 800.6, etc.) will proceed as necessary to conclude the Section 106 review for the undertaking. **The applicant should certify eligibility for this permit using Criterion C on their Notice of Intent for permit coverage.**

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***APPENDIX F***  
***NEW OR INCREASED DISCHARGES***

DRAFT

New or Increased Discharges Avon, MA					
Location	Description	Proposed Use	Area	Contributing Area to MS4	BMP
**Harwood Rd	Housing Community	Residence	27 acres	27 acres	Stormceptor unit and detention pond

\*\* Example of what would be written for a new or increased discharge

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***APPENDIX G***  
***SSO INVENTORY***

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Sanitary Sewer Overflow (SSO) Inventory									
Avon, MA									
Location	Discharge Location	Is Discharge Entering MS4? (Y/N)	Date/Time of SSO Occurrence	Estimated Volume of SSO Occurrence	Known/Suspected Cause	Mitigation Measures Completed	Mitigation Implementation Date	Mitigation Measures Planned	Mitigation Implementation Schedule
1 Example Rd	Enters into Example Pond	Yes	August 4, 2016 9:00 AM - August 5, 2016 3:00 PM	1,200 gallons	Illicit resident connection	Illicit connection removed	August 8, 2016		

\*The SSO occurrence listed above is an example

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***APPENDIX H***  
***CURRENT STORMWATER BYLAW***

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***APPENDIX I***

***2018 ANNUAL REPORT SELF EVALUATION***

***ANNUAL EVALUATION FOR YEARS 1 -5+***

DRAFT

**Municipality/Organization:** Avon, MA  
**EPA NPDES Permit Number:** MAR041089  
**MassDEP Transmittal Number:** W-044647  
**Annual Report Number & Reporting Period:** Year 15  
April 1, 2017 – March 31, 2018

## NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2018)

### Part I. General Information

**Contact Person:** William A. Fitzgerald, Jr. **Title:** DPW Director  
**Telephone #:** 508-588-1414x1024 **Email:** wfitzgerald@avonmass.org  
**Mailing Address:** Town Hall, 65 East Main St, Avon MA 02322

#### Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

**Signature:** 

**Printed Name:** William A. Fitzgerald, Jr.

**Title:** DPW Director

**Date:** 4/30/18

## Part II. Self-Assessment

In 2017, Avon built on work performed in previous years. Asset management and mapping completed as part of the Water Infrastructure Planning and Technical Assistance (WIPTA) Grant, completed in 2016, informed work for the DPW on the overall condition and life expectancy of their stormwater assets. In addition to the location of these assets, the Town extended their mapping to include attributes related to the condition of the assets which allows the Town to utilize their field based operations and asset management system, Utility Cloud, to produce work flows for these assets. The mapping and asset management work continues to improve the efficiency of the maintenance and repairs of the stormwater system.

Furthermore, Avon was the recipient of a Southeast New England Program (SNEP) Grant from the U.S. Environmental Protection Agency (EPA) and the New England Interstate Water Pollution Control Commission (NEIWPCC) in 2016. This grant, titled “Examining Stormwater Pollution to Trout Brook”, has allowed for the Town to take a comprehensive approach to addressing both stormwater and drinking water concerns. In 2017, the Town made significant progress on the grant. The Quality Assurance Project Plan (QAPP) for the sampling component of the grant was developed in the previous permit year and was used for field sampling as part of the project. The QAPP defined stringent sampling procedures that had to be followed to confirm that the data generated was scientifically valid and describes the quality assurance policy, management, structure, and procedures to implement the requirements necessary to verify, calibrate, and validate the output of the water quality samples and GIS data reviewed as part of this project.

Work completed under the grant in 2017 included:

- Comprehensively summarizing known pollution problems in the watershed based on impairments and TMDLs, drinking water pollutants of concern, and summarizing land use characteristics to evaluate possible sources of pollutants and sediment loads to Trout Brook including septic systems, municipal land and open space, stormwater infrastructure, roadways, overall land use, impervious cover and directly connected impervious cover, and soils.
- Identifying priority catchment areas, by first delineation of catchments using GIS. Initial catchment delineations for outfalls discharging within the Trout Brook Watershed were completed after reviewing and relying on the Metropolitan Planning Commission’s GIS-Based Catchment Delineation and Ranking Methodology available through the Neponset Stormwater Partnership.<sup>1</sup> Delineations were completed using data from the 2011 Northeast LIDAR dataset<sup>2</sup>, hydrology from MassDEP, roadway centerlines from MassDOT, and right-of-way information from the Town’s parcel layer. Catchments were initially delineated using the Neponset methodology but many of the catchments were manually adjusted because of the lack of

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<sup>1</sup> MAPC. February 2015. *Neponset Outfall Catchment Analysis*.

URL: <https://github.com/MAPC/stormwater-toolkit>

<sup>2</sup> LIDAR 2011 Northeast Dataset

connectivity in the Town's stormwater system. Catchment boundary adjustments were made using a desktop assessment after analyzing the nearby topography using a 3 foot contour layer developed in Town and USGS topography. The results of this delineation process produced 24 catchments. Catchment delineation using topography alone is not appropriate and does not correctly represent the drainage area contributing to that outfall. As more of Avon's system is mapped the catchments will need to be further refined.

- Conducting outfall screening during dry and wet weather to characterize the levels of pollutants reaching Trout Brook from the priority catchment areas. Samples were analyzed using field instrumentation and test kits for Temperature, Conductivity, Salinity, Dissolved Oxygen, pH, and Chlorine. Additionally, the samples were analyzed at a laboratory for Ammonia, Surfactants, Total Nitrogen, Total Phosphorus, Total Sodium, Fecal coliform, E. coli, Total Suspended Solids, and BOD5.

Remaining work on the grant, to be completed by June 30, 2018, includes identifying and assessing structural Best Management Practices for selected catchments and preparing conceptual designs for structural BMPs to reduce pollutants of concern. This grant supports and enhances the Town's overall stormwater management program, and is part of the Town's comprehensive approach to water management. Avon recognizes the impact stormwater has not only on the environment but on the Town's drinking water; since almost all stormwater in Avon releases into the drinking water well Zone II's, and much of it flows through Zone I's, maintenance and performance of the stormwater system is as much a drinking water issue as a receiving water concern.

### Part III. Summary of Minimum Control Measures

#### 1. Public Education and Outreach

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities Year 16
101	Stormwater Impacts Mailer	Selectmen	1 Town Wide Mailing	The stormwater impacts mailer has been included in town-wide Selectmen's mailing in previous permit years.  In recent years, Town has provided information on pet waste pickup to dog owners when licenses are renewed.	Continue to include in the Selectmen's mailing as budget allows.
102	School Stormwater Science Project	TA/School Sup't DPW	1 Class Science Project	Based on discussions with School/Town officials, this BMP is not feasible due to curriculum limitations.	No further work planned.
103	Stormwater on Local Cable Access Show	Town Administrator DPW Director, Highway Foreman Town Administrator	1 show on environmental/stormwater issues	Showed EPA/DEP stormwater programs on Avon local cable in pervious permit years.	Continue to air EPA/DEP info as budget allows.
104	Youth Stream Cleanup	Board of Health	Annual Clean Up Day	Held in May 2017	Continue to hold Community Cleanup Day as budget and schedule allows.

**1a. Additions**

105	Grant funded Public Ed and Outreach	DPW	N/A	This BMP was added in Permit Year 11 in anticipation of obtaining the 319 grant. This grant was not obtained and therefore this BMP is no longer included.	No further work planned.
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## 2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities Year 16
201	Stormwater Management Task Force	Town Administrator DPW Director	Establishment of Task Force	The implementation of the task force has been delayed and is anticipated to commence once a new permit is finalized.	Implement the working group once new permit is issued.
202	Publicity of Stormwater related articles/hearings	Town Administrator DPW Director	Public Announcements for all stormwater articles/hearing	All information (Conservation Commission/ATM meeting minutes, etc.) pertaining to stormwater and stormwater management are available on the Town's website	Continue to update website with relevant stormwater management information
203	Science Contest sponsored by Business Association	Town Administrator DPW Director	Stormwater Science Contest	Due to limited interest, the Science Contest was not sponsored during permit year 15.	No action planned at this time. The Business Association has other Town priorities.

### 2a. Additions

204	Annual Town Meeting	DPW Director	Discuss Stormwater Management at Annual Town Meeting	DPW Director spoke at the Annual Town Meeting, and discussed the connection and importance of stormwater management and drinking water quality	Continue to speak at Town Meetings as appropriate to support ongoing stormwater and water quality projects and improvements.
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### 3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities Year 16
301	Map Stormwater Sewer Infrastructure	Town Administrator and Highway Operations Manager	Completed GIS Map	The Town continues to update the GIS map as new information becomes available, and incorporate additional attribute data related to condition of assets.	The Town will continue to update the GIS map as new information becomes available, and incorporate additional attribute data related to condition of assets.
Revised		DPW Director and Highway Foreman			
302	Education Flier on Basement Good Housekeeping Practices	Town Administrator and Board of Health	Town-wide mailing	During Permit Year 15, the Board of Health did not have the resources to implement this BMP.	Re-evaluate if the BOH has the resources to implement this BMP in Permit Year 16
Revised		TBD			
303	Illicit Discharge Hotline	Town Administrator and Highway Operations Manager	Establish Hotline	The Town is currently using existing phone lines. Residents call the Town Administrator, Board of Health and/or Conservation Commission regarding pollution, sewage breakouts from septic systems, etc.	Continue to field phone calls using existing Town lines.
Revised					
304	Illicit Discharge Bylaw	Planning Board	Bring By-Law before Town Meeting	The Fire Department, Board of Health, and Conservation Commission have authority to address illicit discharges.	Revisit authority under next general permit.
Revised					



### 3a. Additions

305	Annual Catch Basin Cleaning - IDDE Screening (See also 602)	DPW/Contractor	CB's cleaned and screened, obvious irregularities reported to DPW for follow up	Completed	To Complete

#### 4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities Year 16
401 Revised	Construction Site E & SC Bylaw	Planning Board	Bylaw brought before Town Meeting	The Planning Board has created an Erosion Control plan based on EPA's sample plan. Need to discuss further action with Planning Board  Planning Board has enacted an in-house erosion control plan to deal with runoff at construction sites. Will continue to work on avenues in which to control runoff from existing sites.	Revisit authority under next MS4 general permit.
402 Revised	Site Plan Review Amendment	Amendment Article brought before Town Meeting	Amendment Article brought before Town Meeting	The Planning Board has created an Erosion Control plan based on EPA's sample plan.	No further action planned.
Revised					

#### 4a. Additions


## 5. Post-Construction Stormwater Management in New Development and Redevelopment

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities Year 16
501	Stormwater Management Bylaw	Planning Board	Bylaw brought before Town Meeting.	Erosion Control plan created, based on the EPA's sample control plan Planning Board has stringent recharge requirements.	Revisit authority under next MS4 general permit.
Revised					
502	Site Plan Review Amendment	Planning Board	Amendment Article brought before Town Meeting.	Erosion Control Plan created, based on EPA's sample control plan	No further action planned.
Revised					
Revised					

### 5a. Additions


## 6. Pollution Prevention and Good Housekeeping in Municipal Operations

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities Year 16
601 Revised	Annual Street Sweeping	Highway Foreman with DPW Director	Sweep all Town streets once per year	Completed- all Town roads were swept at least once during Permit Year 15	Continue renting a broom sweeper and sweep all Town roads at least once during the year.
602 Revised	Annual Catch Basin Cleanout	Highway Department	Clean all catch basins once per year	Completed- all catch basins were cleaned during Permit Year 15	Continue contracting out yearly catch basin cleanings.
603 Revised	Environmental Assessment of Highway Maintenance Facility	Highway Operations Manager	Completed Assessment	Installed properly designed catch basin and oil water separator.	No further action planned. Work was completed to address findings of assessment.
604 Revised	Highway/Water Depts. Good Housekeeping Education	Highway Operations Manager and Water Foreman	At least 1 training for all Water/highway Dept. Staff	Consultants were hired to audit the Departments. Containment and other BMPs are in place. The Town is currently addressing other items noted during the audit.	Develop overall DPW staff training plan with good housekeeping component under next MS4 general permit.
605 Revised	Environmental Assessment of Municipal Facilities	Town Administrator DPW Director	Completed Assessment	No activity completed during this permit year.	Determine if additional work is needed and address under new MS4 general permit.

606	Wastewater Management Plan	Board of Selectmen	Plan complete	A comprehensive wastewater management plan was started for Avon numerous years ago.  Avon continues to participate in regional discussions about wastewater management that are ongoing through OCPC and DEP	Plan still under review by the Massachusetts Department of the Environment. Significant investment was made to develop a long term plan to address present and future wastewater discharges, however, no further action is planned at this time and depends on budgets and political investment.
Revised		Board of Selectmen/TA/DPW			
607	Drainage Assessment Brentwood Neighborhood	Board of Selectmen/	Evaluation of Phase II Continues	Project is two phases phases—Pond St that has been completed. The Brentwood Road portion design is planned for future.	Mapping and condition assessment of existing system planned.
		Board of Selectmen/TA/DPW			

#### 6a. Additions

608	Snow Fighting Modifications	DPW	Operations consistent with plan	See Self-Assessment section for details; the use of sand has been phased out almost entirely.	Continue to modify and adjust snow operations as needed.
609	Training and tracking systems, safety Program	DPW	Plan implementation	Modified EMS includes more detail on good housekeeping Safety walkthrough by Workers' Comp group includes assessment of exposure to activities that may impact stormwater runoff and good housekeeping	Continue to implement and evaluate adding additional DPW operation areas Develop overall DPW staff training plan with good housekeeping component
610	Evaluate Sewering Industrial Park Area	Board of Selectmen/TA/DPW	Progress on evaluation	Consultant delineated wetlands in town owned land that is possible site for onsite treatment system for Industrial Park	Continue to evaluate if sewerage the Industrial Park Area of Town is feasible

## 7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA)

Per the 2016 MS4 permit, effective July 1, 2017 as of the date of this annual report, Avon has stormwater discharges that discharge to waterbodies, or their tributaries, that are water quality limited due to nitrogen and/or phosphorus. Although none of these have an EPA approved TMDL, Avon recognizes the importance of addressing these impairments and, as part of the SNEP grant, is reviewing BMPs that could address these water quality limited waterbodies. The Town's water department is currently monitoring subsurface migration of various pollutants in the area of test well sites on the Brockton/Avon Town Line as well. In addition, Trout Brook located in Avon is a tributary of the Taunton River watershed which is subject to a TMDL approved in 2011 for pathogens. The Town has been awarded the SNEP grant to investigate the sources of impairment in Trout Brook and will continue to work towards identifying and eliminating bacteria and pathogen sources into Trout Brook.

The Town continued to work on the components of the SNEP grant during Permit Year 15. The work completed includes the following: identifying priority catchment areas, surveying the land use in priority areas, and conducting outfall screening. For Permit Year 16, the Town will complete work under this grant by June 30, 2018. Remaining work includes identifying and assessing structural Best Management Practices for selected catchments, and preparing conceptual designs for structural BMPs to reduce pollutants of concern. A final report will be prepared and submitted to EPA and MassDEP as required by the grant.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities Year 16
Revised					
Revised					
Revised					

### 7a. Additions


### 7b. WLA Assessment

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***APPENDIX J***

***MINIMUM CONTROL MEASURES BMPs***

DRAFT